DOCUMENT RESUME

ED 146 200 TM 006 580

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TITLE	The Effects of Classroom Interaction Patterns and Student Characteristics on the Acquisition of Proficiency in English as a Second Language. Summary Report.
INSTITUTION	Educational Testing Service, Princeton, N.J.
SPONS AGENCY	New Jersey State Dept. of Education, Trenton.
REPORT NO	ETS-PR-77-5
PUB DATE	May 77
NOTE	21p.; For related documents, see TM 006 581, 582, and 583
EDRS PRICE	MF-$0.83 HC-$1.67 Plus Postage.
DESCRIPTORS	Academic Achievement; Adult Basic Education; *Adults; Age Differences; Classrooms; Day Schools; Educational Background; *English (Second Language); Ethnic Origins; Interaction; *Language Instruction; *Language Proficiency; Oral English; Predictor Variables; Sex Differences; Spanish Speaking; *Student Characteristics; Student Teacher Relationship; Teacher Behavior; Teacher Characteristics; Teaching Styles; *Teaching Techniques

ABSTRACT

A study to determine the effects of certain teaching methods on English proficiency is summarized. Participants were students and teachers of English as a second language at the West New York (New Jersey) Adult Learning Center. A pretest, observation, post test design was used. Data on student background characteristics such as age, sex, previous education and employment, and country of origin were also collected. Results of the statistical analysis indicated that teaching style did affect student gains in proficiency, particularly for certain types of students. The analysis--which considered student background, classroom interaction patterns, pretest performance, and final proficiency--indicated that there were four combinations related to superior classrooms. (1) Students with more education, more previous English instruction, and higher level jobs learned more with a free response mode and a question and answer paradigm. (2) Students who had been in this country longer, had higher level jobs, and had studied English previously demonstrated exceptional gains when instruction included direct-read and/or ask questions along with free response, and question-answer-corrective feedback-prompt-answer interactions. (3) Well-educated, well-employed women with superior English training in their country of origin demonstrated high achievement with the interaction pattern, teacher direct-student read and/or ask question. (4) Younger, less well-educated male students who had recently arrived from Western Europe learned well when interaction patterns were supportive and individualized. (Author/HV)

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ED146200

PR-77-6

THE EFFECTS OF CLASSROOM INTERACTION PATTERNS AND STUDENT CHARACTERISTICS ON THE ACQUISITION OF PROFICIENCY IN ENGLISH AS A SECOND LANGUAGE

SUMMARY REPORT

By

Meredith K. Stone
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U.S. DEPARTMENT OF HEALTH
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TM006 580

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A project conducted by Educational Testing Service for the West New York, New Jersey Board of Education and funded by the New Jersey State Department of Education

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Introduction

This report is a nontechnical summary of the study conducted by Educational Testing Service with the English as a Second Language (ESL) classes at the West New York Adult Learning Center. The purpose of the study was to find out if some teaching methods or procedures led to greater English proficiency than others. The participants were six ESL teachers and their 14 different classes of adult students.[1]

The basic design was one of pretest-observation-posttest. We measured initial student proficiency in November, observed classes daily from January through April, and then measured student proficiency again in May. We also collected data on student background characteristics such as age, sex, previous education and employment, and country of origin. Statistical analysis procedures were used to relate differences in teacher behavior to student gains in proficiency. These analyses indicated that teacher style does affect proficiency, particularly for certain types of students.

Measuring English Proficiency

The first issue in measuring anything is to define what you want to measure. What is proficiency? The center has three goals with respect to increasing the English proficiency of their students: (1) that the students will be able to <u>understand</u> conversational English; (2) that they will be able to <u>use</u> English to make themselves understood in day-to-day situations; and (3) that they will acquire the basic structures of English so that they can <u>continue</u> to grow in proficiency.

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[1] Data were also collected for six night-school teachers and their classes. However, the most informative results came from the day-school sample and it is these research findings that are reported here. For a complete report, contact the author.

The Center regularly used two tests of proficiency: the John Test (a picture-related oral proficiency test) and the Morano Test (a test of written grammatical usage). However, neither of these adequately represented the Center's goals or the teachers' objectives. Therefore, a more comprehensive test was constructed.

A list of the teachers' objectives was compiled and a representative test of 60 items was constructed. Three scores were obtained for each item: (1) comprehension; (2) use of appropriate structure; and (3) correctness of response. Since this test was not available in November, the John and Morano test scores were used as indicators of initial proficiency.

Two other kinds of proficiency were measured, decoding skills and reading literacy. These were included to see if certain teaching procedures not only increased speaking proficiency but reading proficiency as well. The two sets of tests are presented below:

PRETESTS (November)	POSTTESTS (May)
JOHN	ORAL PROFICIENCY
MORANO	Comprehension
	Structure
	Correctness
LITERACY	LITERACY
DECODING	DECODING

The Observation System

An in-class observation system was developed which allowed for sequential coding of classroom behavior. This categorical system was based on what the teachers and students actually did in the Center's classrooms. The categories were constructed to reflect procedures involved in both the silent-way and audiolingual approach to ESL teaching. Different codes were used to record nonverbal and Spanish behaviors. Comments were made to note any unusual classroom

occurrence. A sample observation code sheet is shown in Figure 1. Column heading indicate teacher and student behaviors. Observations were recorded from left to right: Classroom setting (columns 1-3); initiating teacher behavior (4-9); to whom (11); first student behavior (12-20); teacher feedback (22-24); other teacher responses (26-34); subsequent student behaviors (35-45); comments (48).

The system allowed for recording strings of behavior between any particular student and teacher. Each string of interaction was an episode. An episode could be initiated by either the teacher or a student and ended when the teacher addressed or was addressed by a different student.

Each classroom was observed 20 minutes a day from mid-January through the first week of April giving an average of nearly 600 minutes of observation per class.

Description of the Sample

The students in the 14 classes ranged in age from 19 to 70. The majority of the students were imigrants from Cuba; most of the other students are from Caribbean or South American countries. Thus, the native language of nearly all the students was Spanish. Two-thirds of the students were women; the mean age was 46; and the mean level of education was tenth grade. Students had been in the U. S. an average of six years. Most had studied English in their previous country or in the U. S.

Five of the six teachers were women. All six teachers had completed some graduate work. Most of the teachers' experience in teaching ESL had been with adults. Two teachers said they used the audiolingual method of

FIGURE 1

Observation Code Sheet with an Illustration of a Possible Classroom Behavior Sequence

DATE — TEACHER — TIME — NO. OF STUDENTS 8 OBSERVER —

CLASS SET UP [T] STRUCTURE simple future

	1 CONTENT	2 MATERIAL	3 STRATEGY	TEACHER BEHAVIOR 4 QUESTION	5 SERIAL REDIRECT	6 DIRECTION	7 MODELS	8 WRITES ON BOARD	9 EXPLANATION	10	11 CLASS/GROUP/IND.	STUDENT BEHAVIOR 12 ANSWERS	13 FREE RESPONSE	14 PRACTICE	15 WRITES ON BOARD	16 READS	17 CHOOSES NOT TO RESP.	18 ASKS QUESTIONS	19 CONVERSATION	20 S/S FEEDBACK	21	TEACHER BEHAVIOR 22 POSITIVE	23 CORRECTIVE	24 NEGATIVE	25	26 MODELS	27 PROMPTS	28 ASKS TO REPEAT	29 REPEATS	30 EXPLANATION	31 WRITES ON BOARD	32 DIRECTION	33 QUESTION	34 ALTERNATE RESP.	35 STUDENT MODELS	36 STUDENT PROMPTS	STUDENT BEHAVIOR 37 ANSWERS	38 FREE RESPONSE	39 PRACTICE	40 WRITES ON BOARD	41 READS	42 CHOOSES NOT TO RESP.	43 ASKS QUESTIONS	44 CONVERSATION	45 S/S FEEDBACK	46	47	COMMENT 48
1	/	/	/	✓							✓	✓										✓						N									✓											
2																										N									✓											
3																									✓					✓																
4							✓				1			✓																								✓									
5																																															

8

The original observation sheet was 8 1/2" by 14".

9

teaching. The majority of the teachers stated that they believed that teaching styles should be eclectic and that students should dominate classroom interaction.

The majority of classes met for an hour-and-a-half a day, five days a week on the standard school calendar. Attendance was excellent, although there was a high turnover of students--only 81 of the original 148 students were still in the classes at the end of the year. All analyses were performed on those students for which we had complete information.

Patterns of Classroom Interaction

Factor analysis, a statistical procedure, was used to identify the association among the different behaviors observed. We found four patterns of classroom interaction which characterized the beginning of an episode. They were:

1. Teacher Model--Student Practice: The teacher illustrates verbally an English-language structure or pronunciation. The student in turn attempts to imitate the teacher.

   Teacher: "New Jersey"
   Student: "New Jersey"

2. Teacher Direct--Student Read: The teacher directs the student to read printed material containing the structure being learned. The student in turn reads the sentence containing the structure.

   Teacher: "George, would you read the first sentence?"
   George reads: "If I had time, I would go with you."

3. Teacher Direct--Student Read or Ask Question: This pattern is the same as the above pattern except that the student may ask a question about the material to be read.

> Teacher: "George would you read the first sentence?"
> George: "I fill in the space with the past tense?"

4. Teacher Question--Student Answer: The teacher asks a question; the student answers it.

> Teacher: "What is the short way of saying 'I would,' the contraction?"
> Student: "I'd."

These patterns of beginning an episode were followed by three distinctive patterns of continuing the interaction. They were:

5. Corrective Feedback--Model--Practice: The student has responded by reading (2 and 3 above), or by imitating (1 above) or by answering a question (4 above). The teacher corrects the student's response and gives the correct form. The student tries the response again.

> Teacher: "The short form of 'I will,' is 'I'll.' I'll go with you, if I have time."
> Student: "I'll go with you, if I have time."

6. Corrective Feedback--Prompt--Student Answer: This pattern is very similar to the one above, except that the teacher does not model the appropriate response. Rather he or she encourages the student to try the response, prompting him or her in the process until the student provides the appropriate response.

> Student: "I will go to the store tomorrow."
> Teacher: "I ___?" (indicates short form with fingers)
> Student: "I'll go to the store tomorrow."

7. Teacher Question--Student Answer: (This pattern appears both as initiating and in continuing an episode.) One of the initiating patterns has begun the episode and the student has read, asked, or answered a question. The teacher then asks a question which the student answers.

Teacher: "Can you put it in the past tense?"
Student: "I went to the store yesterday."

A set of these initiating and subsequent patterns might be one of these:

(1) Teacher Direct--Student Read ⟶ Teacher Question--Student Answer:

Teacher: "George, would you read the first sentence?"
George reads: "If I had time, I would go with you."
Teacher: "Can you use the short form of I would?"
George: "If I had time, I'd go with you."

(2) Teacher Model--Student Practice ⟶ Corrective Feedback--Model--Practice:

Teacher: "I'll go tomorrow."
Student: "I'...ll go tomorrow."
Teacher: "O.K. But slide it together more. I'll go tomorrow."
Student: "I'll go tomorrow."

(3) Teacher Question--Student Answer ⟶ Corrective Feedback--Prompt--Student asnwer:

Teacher: "How would you make it negative?"
Student: "I will not go tomorrow."
Teacher: "O.K. But use the short form. I wo..."
Student: "I won't go tomorrow."

Three other patterns were found which sometimes occurred at the beginning of an episode and sometimes after an episode had been started in one of the ways described above. These were:

8. Free Response: The teacher indicates the structure, but not the ideas or vocabulary.

   Teacher: "If I were _____, I could _____."
   Student: "If I were taller, I could play basketball."

9. Student-Student Feedback: The students prompted each other or one or more students repeated what another student had said. This interaction usually occurred in Spanish.

10. Other: This category includes a variety of teaching activities such as games; students adding to lists of adjectives, nouns, and verbs on board, then making sentences from lists; a student reading for several minutes; small groups discussing a reading assignment or cartoon; students making a list of everything one has to know to go to the gas station or grocery store.

Classroom Differences in Interaction Patterns

The next step, having found distinct patterns of behavior, was to ask whether or not teachers differ in the extent to which they use these patterns. The contrast of overall differences between classrooms with the amount of variation on a day-to-day basis within classrooms clearly indicated that teachers differ more from each other than they do in their own day-to-day teaching.

Another type of analysis was performed to find the bases on which classes were most sharply discriminated. The results of this analysis can be portrayed in terms of axes with each class having a score with respect to each axis.

In Figure 2 the nine interaction patterns described above are located with respect to two axes: the patterns below Axis I require the student to imitate or practice, while those above the axis require the student to

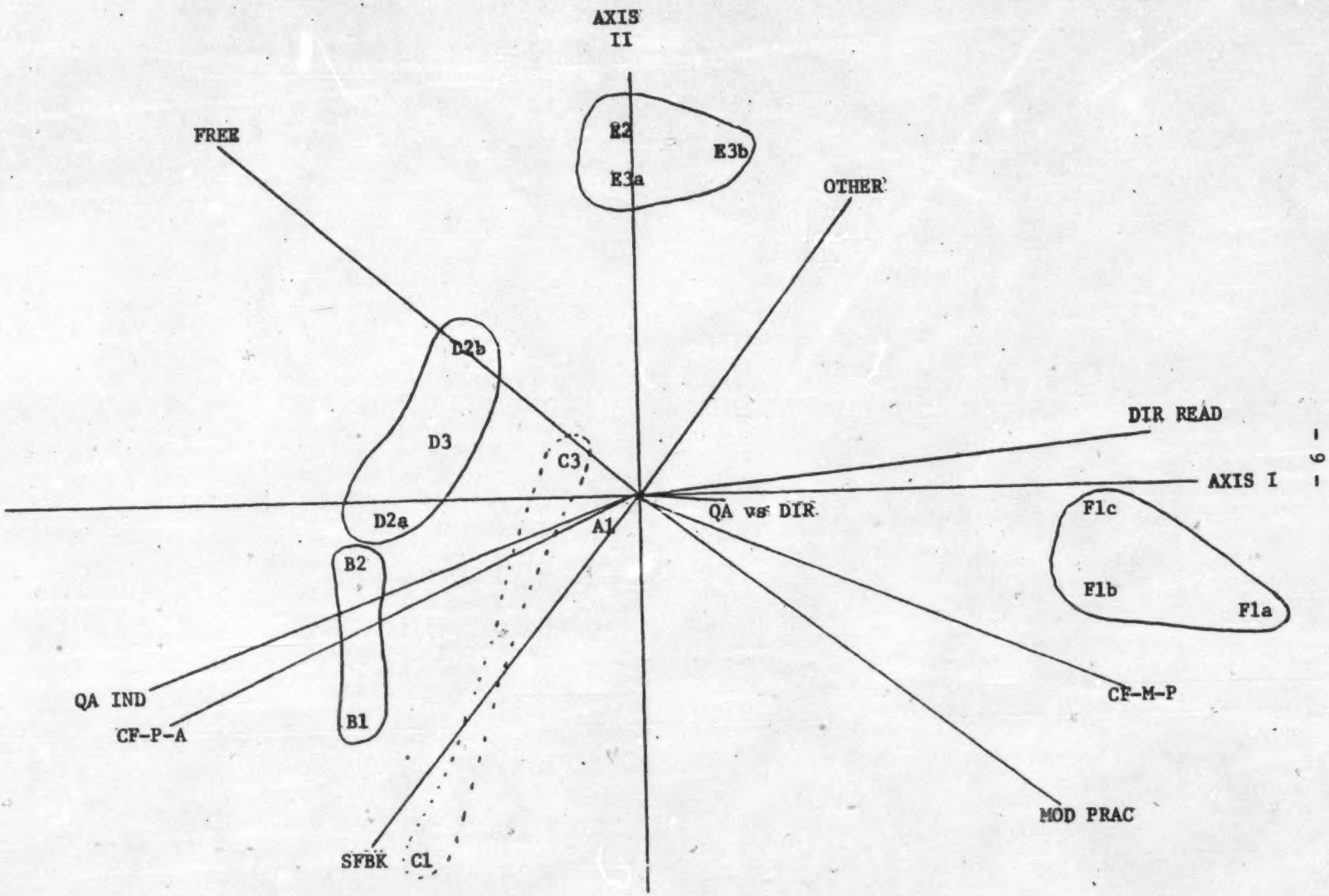

Figure 2

The Plot of Differences Between Classrooms in Interaction Patterns

generate responses using a structure. Each of the classrooms can be characterized by its relation to the axes.

The most outstanding feature of Figure 2 is the obvious clustering of classrooms taught by the same teacher. (Each class is represented by a letter to indicate the teacher, a number to represent the level, and a lower case letter to indicate different classes.) The evidence is thus incontrovertible that teachers have consistent and distinct "styles" of interaction with students--styles which do not in general vary markedly even when teaching classes of quite different initial ability level.

Our analyses indicate that teachers do differ significantly in how they teach. Are these differences related to student learning?

The Relation of Teaching Performance to Student Learning

In this research design there were three domains of variables that were potential predictors of student learning: student background characteristics; initial level of proficiency; and classroom experiences. The association of each of these domains with the posttest scores was derived from regression analyses. What this statistical technique tells you is how well each of these domains can predict student learning.

The background variables were found to be significantly related to posttest scores. Specifically, those students who were relatively younger, had a higher status job in their former country, and had studied more English in the United States tended to do best on the posttest measures. Since this relation was significant, it was necessary to control for background in the remaining analyses.

The next step was to use the weighted background scores and pretest scores to predict learning. As would be expected, the prediction using both these sets of variables was significantly better than using just one or the other.

The crucial question, however, was whether or not the classroom-instruction variables would add to the accuracy of our prediction. In other words, do the differences we found in teacher behavior affect student learning when background and pretest information has already been taken into account? And further, do different types of instruction lead to different kinds of proficiency?

The answer to both these questions was yes. Classroom instruction made a small but significant increase in the prediction of student learning. More interesting, however, was the apparent trade-off between different types of proficiency. Specifically, the classroom interaction behaviors which best predict oral proficiency were those associated with individualized instruction, silent-way techniques, and an open and supportive classroom climate, while increased literacy and decoding skills were associated with a grouped, audiolingual and more directive classroom interaction behaviors.[2] What appears to be helpful for oral proficiency appears to be detrimental for literacy and decoding, and vice versa.

The Relation of Classroom Instruction to Learning in Particular Types of Students

Our analyses thus far have indicated that: (1) there are significant and consistent differences in the way these ESL teachers teach; (2) these differences in instruction are related to student learning; and (3) different types of instruction tend to increase different kinds of proficiency. We

[2] In Figure 2, teachers D and E as compared with teacher F.

noted earlier that teaching style tended to be consistent across any one teacher's classes. Yet some classes made more gain than others. Since the teacher was providing the same kind of instruction, was there an interaction between style of instruction and type of student? In other words, do students with certain characteristics learn better in one type of instructional setting than another? An analysis which considered all four factors--student background, classroom interaction patterns, pretest performance, and final proficiency--indicated that there were four combinations which lead to superior classrooms.

The first type of superior classroom had students with a history of relatively more education, more previous English, and a higher level job. As would be expected their initial level of proficiency was also high. These students learned more when taught with the "free response" mode of instruction and question-answer interaction paradigm with little, if any, of the more directive procedures.

The second type of classroom which made exceptional gains in literacy as well as oral proficiency contained students who had been in this country relatively longer, were established in higher-level jobs, and had studied English in their former country. The type of instruction associated with these classes was "direct-read and/or ask questions" along with "free response," "other," and the "question-answer-corrective feedback-prompt-answer" patterns of interaction.

A third group contained women who were relatively well-educated and well-employed, with a history of superior English training in their country of origin. These classes had above average performance on the Morano, Oral Proficiency Correctness, and Decoding measures of proficiency. Two interaction patterns predominated in these classrooms: "teacher direct-student read and/or ask question" and "Other." Again the more directive patterns of instruction were deemphasized.

The fourth type of classroom which made superior gains, particularly in decoding, contained students who were recent arrivals from Western Europe, less well-educated, younger, and predominantly male. The interaction patterns in these classrooms were supportive and individualized.

This analysis reveals the complexity of an ESL training program. In order to maximize student achievement one must take into account the interaction of background, initial proficiency and instructional factors.

Conclusions and Recommendations

This report has given a brief overview of the research conducted to find out if certain classroom-instruction patterns could be observed and then related to student gains in English proficiency. It should be remembered that we were concerned with relative gains in proficiency. All classes at the Center gained in proficiency: we were interested in why some classes gained more than others. Nine reliable patterns of classroom interaction were found for the 14 classrooms. Teachers differed in the extent to which they used each of these instructional patterns, but no teacher used one pattern to the exclusion of all others. These differences in use of instructional patterns were found to relate to specific kinds of student learning. It appears that the classroom instruction patterns which lead to greater oral proficiency (individualized, silent-way, non-directive and supportive climate) are the opposite of the instruction patterns that lead to better literacy and decoding skills (which are associated with grouped, audiolingual, and directive patterns of interaction).

Directors and teachers of ESL programs, then, who are aware of their objectives and the needs of their students can work toward an appropriate balance of these different patterns of instruction. We want to stress that

it is not simply a matter of silent-way vs. audiolingual procedures, as successful instruction incorporated techniques from both. Indeed, while students generating language is obviously an important aspect of many of the successful instructional patterns, students at the beginner level need to acquire a base from which to generate language. Audiolingual techniques in conjunction with practice in reading are essential at this level. Thus for beginner classes we recommend that instructional strategies which encourage the student to <u>generate</u> language be introduced as soon as there is the base from which to generate, while at the same time continuing those strategies that <u>supply</u> the student with opportunities to hear and practice correct models of language.

The optimum synthesis of these two methodologies will necessarily depend on the needs of a particular class of students, the teachers' objectives for them, and his or her own preferred style of teaching.

An interaction was found between student characteristics, initial proficiency level, type of classroom instruction and superior gains in proficiency. Certain types of students (e.g., those with more education and relatively high initial proficiency) learned more under certain teaching conditions (e.g., free-response and question-answer paradigms) than others. Since teachers tend to be consistent in their teaching style from one class to the next, we recommend that more attention be paid to grouping students according to the background characteristics outlined above and assigning them to a teacher whose instructional style will maximize their learning.

The Center presently organizes instruction on the basis of proficiency level as measured by the John Test. Given that the teachers at the Center work closely with their students, it seems likely that providing teachers

with the additional student background information and making an effort to match groups of students with the instructional procedures most effective for them, may markedly increase both the effectiveness of the teachers and the proficiency of their students.